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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/371,972	08/10/1999	KONSTANTINE I. IOURCHA	3594-US	9872

7590 10/22/2002

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EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TIN

Office Action Summary

Application No.

09/371,972

Applicant(s)

IOURCHA ET AL.

Examiner

Motilewa A. Good-Johnson

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the following communications: application, filed on 08/10/1999; IDS, paper #4, filed on 01/3/2000; Preliminary Amendment A, filed on 02/14/2000; Amendment B, filed on 07/23/2001; Amendment C, filed on 03/25/2002; Amendment D, filed on 09/03/2002.

This action is made final.

2. Claims 1-18 and 23-29 are pending in this application. Claims 1, 8, 9, 13-15, 23 and 27 have been amended.

3. The present title of the application is "System and Method for Rasterizing Primitives using Direct Interpolation" (as originally filed).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 8-13, 15-18, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the book "Computer Graphics Principles and Practice" by Foley et al., in view of Iwaki, U.S. Patent Number 6,275,234, "Display Control System and Method for Controlling Display of Three-Dimensional Graphics Data", class 345/428, 08/14/2001, filed on 03/19/1998.

For claims 1, 2, 4-6, 8-11, 13, 15-18 and 28:

These claims claim the method performed by Gouraud shading which is described in Foley at pages 736-737. Foley describes determining both luminance and color values by the use of Gouraud shading. Pages 737 and figure 15.23 clearly shows applicants interpolation method. Foley's method is performed on a computer, which corresponds to the apparatus of claim 15 for performing the functions of claim 15. However, it is noted that Foley fails to disclose receiving a signal from an interface with parameter data. Iwaki discloses performing a rendering proves and subsequently performing interpolation on three-dimensional graphics data, received from a main memory through an interface, col. 7. It would have been obvious to one of ordinary skill in the art at the time of the invention of Foley to include means for receiving the three-dimensional graphics data through the interface of Iwaki because it is necessary to include input data for graphics processing.

For claims 3 and 29:

These claims claim performing perspective interpolation. This is taught by the z-buffering technique described by Foley at pages 668-672.

For claim 12:

This claim claims using depth values of the first and second points to determine the interior point. This is taught by the z-buffering technique described by Foley at pages 668-672. Figure 15.23 clearly shows the applicants claim.

6. Claims 1, 3-18, 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spackman, U.S. Patent Number 5,739,818 in view of Iwaki, U.S. Patent Number 6,275,234.

Spackman describes interpolation of texture data and specifically describes perspective interpolation. Referring to figure 3 and the written description it is seen that Spackman interpolates points on the edge of a primitive from the vertex's data and determines by interpolation points on the scan line. The interpolation is performed with the X, Y, texture and Z values, thus performing perspective interpolation. However, it is noted that Spackman fails to disclose receiving data from an interface. It would have been obvious to one of ordinary skill in the art at the time of the invention of Foley to include means for receiving the three-dimensional graphics data through modern means such as the interface of Iwaki because it is necessary to include updated input data means for processing graphics.

For claims 5, 6 and 24:

Texture data includes color data and luminance data.

For claim 14:

The plurality of agents is inherent to Spackman. Each part of Spackman that enables the equations and that receives vertex data is the claims agent. The part that feeds the vertex data to the interpolation equations is an arbiter. The part that sends calculated results that are reused in the interpolation equation is the router. However, it is noted that Spackman fails to disclose receiving data from an interface. It would have been obvious to one of ordinary skill in the art at the time of the invention of Foley to

include means for receiving the three-dimensional graphics data through modern means such as the interface of Iwaki because it is necessary to include updated input data means for processing graphics.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Motilewa A. Good-Johnson
Examiner
Art Unit 2672

mgj
October 11, 2002


JEFFERY BRIER
PRIMARY EXAMINER